

Raouia Nibel Zohra Lokbani (KGM9GI)
16/05/2021
Inventory Management System Documentation

Overview:

What is an inventory management system?

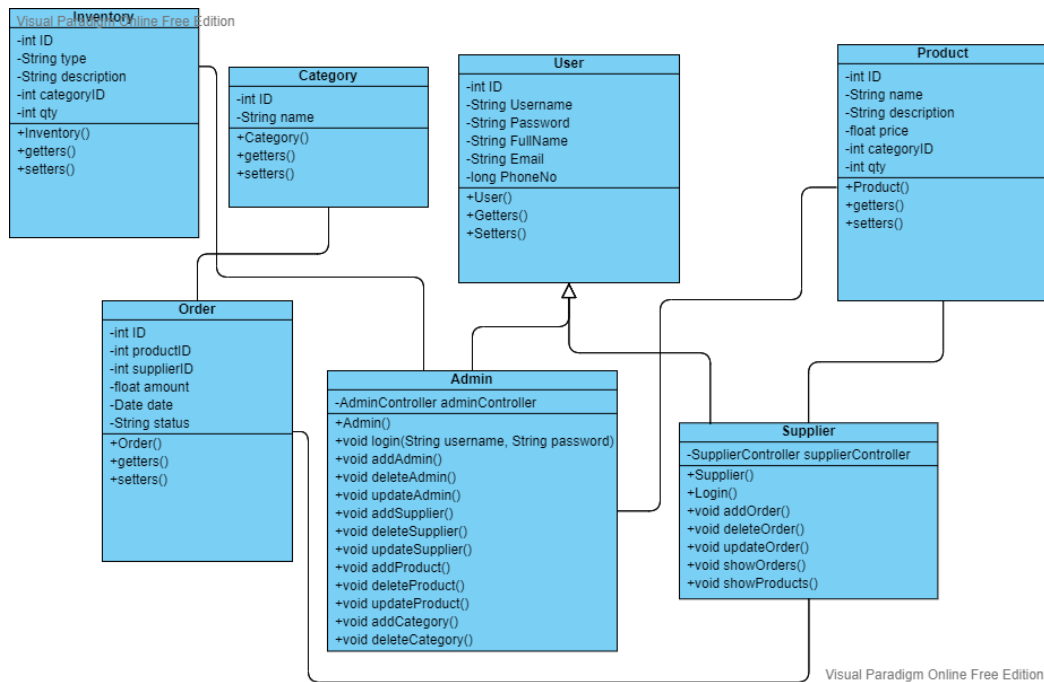
An inventory management system is the process by which you track your goods throughout your business's supply chain, from purchasing to production to end sales.

Tools & Technologies used:

1. MongoDB.
2. Java Language.
3. Ldap.
4. Spring boot.
5. Mongoose.
6. IntelliJIDEA as IDE.
7. Github.

Inventory Management System Documentation

Class Diagram:

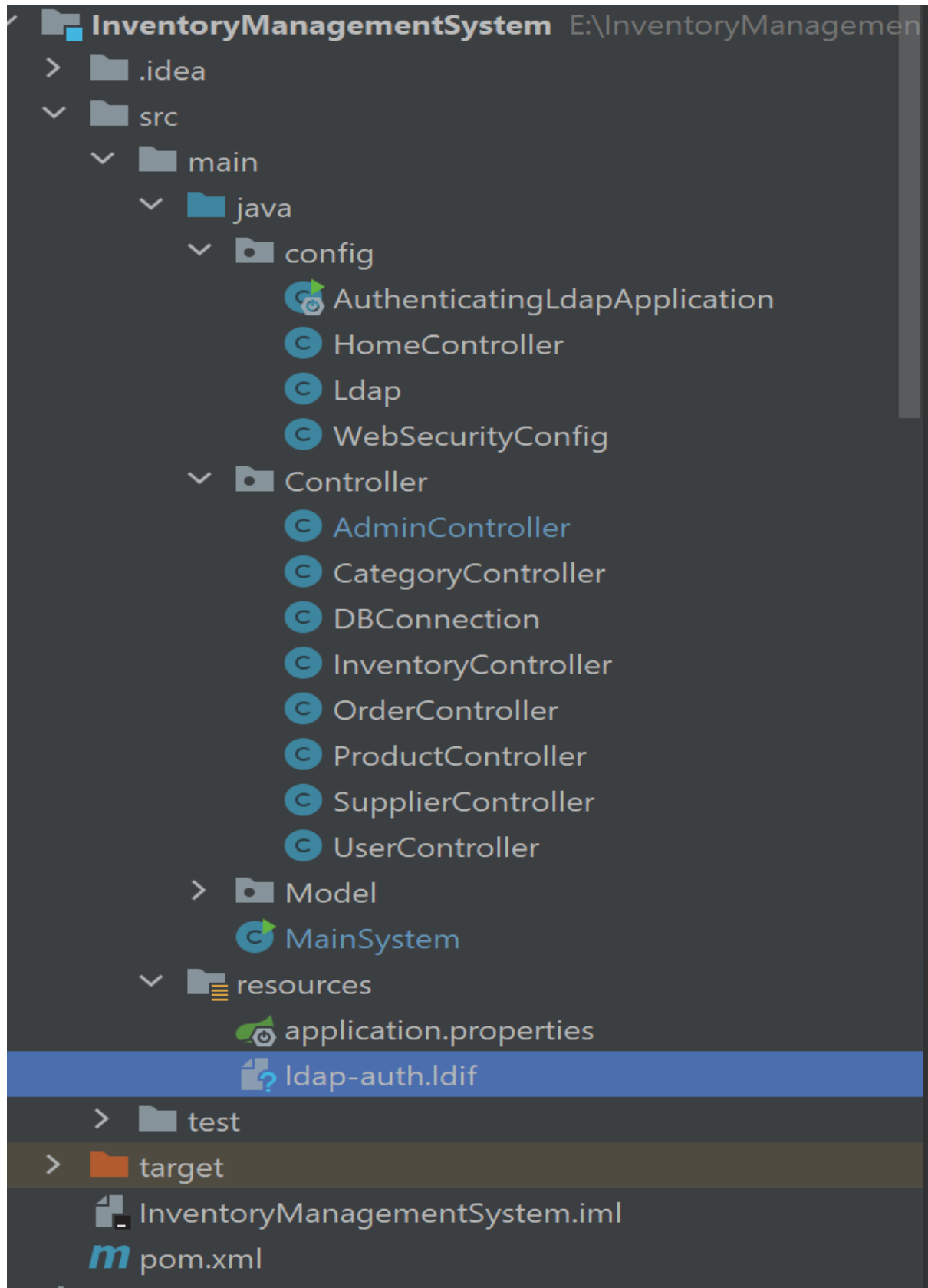


Raouia Nibel Zohra Lokbani (KGM9GI)

16/05/2021

Inventory Management System Documentation

Project files structure










Raouia Nibel Zohra Lokbani (KGM9GI)

16/05/2021

Inventory Management System Documentation

Database (MongoDB Compass):

Collection Name	Documents	Avg. Document Size	Total Document Size	Num. Indexes	Total Index Size	Properties
Admins	2	169.5 B	339.0 B	1	24.0 KB	
Categories	2	49.5 B	99.0 B	1	36.0 KB	
Inventories	2	112.0 B	224.0 B	1	36.0 KB	
Orders	2	113.0 B	226.0 B	1	24.0 KB	
Products	4	153.8 B	615.0 B	1	36.0 KB	
Suppliers	1	174.0 B	174.0 B	1	36.0 KB	
Users	1	171.0 B	171.0 B	1	20.0 KB	

Administrator operations:

```
public void login(String username, String password)
{...}
public void addAdmin()
{...}
public void deleteAdmin(int adminID)
{...}
public void updateAdmin(int ID, String username, String password, String email, long phoneNo)
{...}
public void addSupplier(Supplier supplier)
{...}
public void deleteSupplier(int supplierID)
{...}
public void updateSupplier(int ID, String username, String password, String email, long phoneNo)
{...}
public void addProduct(Product product)
{...}
public void deleteProduct(int productID)
{...}
public void updateProduct(int ID, String name, String description, float price, int qty)
{...}
public void addCategory(Category category)
{...}
public void deleteCategory(int categoryID)
{...}
public void addInventory(Inventory inventory)
{...}
public void deleteInventory(int inventoryID)
{...}
public void updateInventory(int ID, String description, int qty)
{...}
```

Inventory Management System Documentation

```
public void showAdmins() { adminController.showAdmins(); }
public void showSuppliers() { adminController.showSuppliers(); }
public void showProducts() { adminController.showProducts(); }
```

Some execution scenarios:

- **First scenario:** Admin login and add a new supplier, a new category and a new product as shown below:

```
public static void main(String[] args) {
    admin = new Admin();
    admin.login( username: "AdminNybel", password: "NN992110KDJJJ");
    supplier = new Supplier();
    supplier.setUsername("SupplierNike");
    supplier.setID(56);
    supplier.setPassword("SN1921HNIHLJEF");
    supplier.setFullName("NIKE");
    supplier.setEmail("SupplierNIKE@NIKE.com");
    supplier.setPhoneNumber(23456677);
    admin.addSupplier(supplier);
    Category category = new Category();
    category.setID(40);
    category.setName("Sports equipment");
    admin.addCategory(category);
    Product product = new Product();
    product.setID(334);
    product.setDescription("Running Shoes NR23");
    product.setName("NR23");
    product.setQty(50);
    product.setPrice(120);
    product.setCategoryID(40);
    admin.addProduct(product);
}
```

```
18:57:29.229 [main] DEBUG org.mongodb.driver.protocol.command - Execution of command with request id 12 completed
Successful Log In
```

```
18:57:29.252 [main] DEBUG org.mongodb.driver.protocol.command - Execution of command with request id 27 completed
Supplier with ID = 56 was successfully added
```

```
18:57:29.274 [main] DEBUG org.mongodb.driver.protocol.command - Execution of command with request id 28 completed
Category with ID = 40 was successfully added
```

```
Product with ID = 334 was successfully added
```

```
Process finished with exit code 0
```

Raouia Nibel Zohra Lokbani (KGM9GI)
16/05/2021
Inventory Management System Documentation

```
_id: ObjectId("60a14ef934f9097c05780c7c")  
ID: 56  
Username: "SupplierNike"  
Password: "SN1921HNIHLJEF"  
FullName: "NIKE"  
Email: "SupplierNIKE@NIKE.com"  
PhoneNumber: 23456677
```

```
_id: ObjectId("60a00458d0d30554c62dde4f")  
ID: 20  
Name: "OnePlus 8 pro"  
Price: 950  
Description: "New OnePlus 8 pro from OnePlus"  
CategoryID: 2  
Qty: 50
```

```
_id: ObjectId("60a00458d0d30554c62dde51")  
ID: 33  
Name: "Samsung galaxy note 20 ultra"  
Price: 1200  
Description: "New Galaxy note 20 Ultra from Samsung (The latest)"  
CategoryID: 2  
Qty: 120
```

```
_id: ObjectId("60a14ebc873ba6490a264cbe")  
ID: 334  
Name: "NR23"  
Price: 120  
Description: "Running Shoes NR23"  
CategoryID: 40  
Qty: 50
```

```
_id: ObjectId("609ee84deb5b82f2232777c")  
ID: 1  
Name: "Laptop"
```

```
_id: ObjectId("60a00458d0d30554c62dde4b")  
ID: 2  
Name: "Smartphones"
```

```
_id: ObjectId("60a14ebc873ba6490a264cbc")  
ID: 40  
Name: "Sports equipment"
```

Inventory Management System Documentation

- **Second scenario:** Admin login and add a new inventory with the type "Running shoes", he updates an existing supplier and delete another admin as shown below in the code and the MongoDB Compass interface:

```
admin=new Admin();
admin.login( username: "AdminNybel", password: "NN992110KDJJJ");

inventory=new Inventory();
inventory.setType("Running Shoes");
inventory.setCategoryID(40);
inventory.setID(443);
inventory.setQty(50);
admin.addInventory(inventory);

admin.updateSupplier( ID: 33, username: "SupplierMalik", password: "SS45HFHZK456IOEFGGHDD", email: "ZaynMalik@MUSICPROD.com", phoneNumber: 1265782332);
admin.deleteAdmin( adminID: 4);
```

```
19:13:32.007 [main] DEBUG org.mongodb.driver.protocol.command - Execution Successful Log In
```

```
19:13:32.023 [main] DEBUG org.mongodb.driver.protocol.command - Inventory with ID = 443 was successfully added
```

```
19:13:32.056 [main] DEBUG org.mongodb.driver.protocol.command - Supplier with ID = 33 was successfully updated
```

```
Admin with ID = 4 was successfully deleted
```

```
Process finished with exit code 0
```

```
_id: ObjectId("609e9d73be861410a925f925")
ID: 33
Username: "SupplierMalik"
Password: "SS45HFHZK456IOEFGGHDD"
FullName: "Zayn Malik"
Email: "ZaynMalik@MUSICPROD.com"
PhoneNumber: 1265782332
```

Raouia Nibel Zohra Lokbani (KGM9GI)
16/05/2021
Inventory Management System Documentation

`_id: ObjectId("60a004cecf4b70f42fbe987")`
`ID: 12`
`Type: "Smartphones"`
`Description: "Smartphones inventory"`
`CategoryID: 2`
`Qty: 330`

`_id: ObjectId("60a005f00790746867264b12")`
`ID: 22`
`Type: "Laptops"`
`Description: "Laptops inventory"`
`CategoryID: 1`
`Qty: 500`

`_id: ObjectId("60a152bcd2fcc53a68a188a8")`
`ID: 443`
`Type: "Running Shoes"`
`Description: null`
`CategoryID: 40`
`Qty: 50`

- **Third scenario:** Here the admin and the supplier login. Then the supplier add an order with Qty = 30 (which our inventory system will verify and check if there exist enough qty in the inventory). The results are shown below:

```
public static void main(String[] args) {  
    admin =new Admin();  
    admin.login( username: "AdminNybel", password: "NN992110KDJJJ");  
  
    supplier=new Supplier();  
    supplier.login( username: "SupplierNike", password: "SN1921HNIHLJEF");  
    Order order=new Order();  
    order.setID(1234);  
    order.setQty(30);  
    order.setAmount(3600);  
    order.setProductID(334);  
    order.setSupplierID(supplier.getID());  
    order.setDate(20210517);  
  
    order.setStatus("Unpaid");  
    supplier.addOrder(order);  
}
```


Raouia Nibel Zohra Lokbani (KGM9GI)

16/05/2021

Inventory Management System Documentation

```
19:19:39.841 [main] DEBUG org.mongodb.driver.pro
Order with ID = 1234 was successfully added

Process finished with exit code 0
```

```
_id: ObjectId("60a152bcd2fcc53a68a188a8")
ID: 443
Type: "Running Shoes"
Description: "NIKE INVT"
CategoryID: 40
Qty: 20
```

```
_id: ObjectId("60a1542bf426f728106668e0")
ID: 1234
ProductID: 334
SupplierID: 0
Amount: 3600
Date: 20210517
Status: "Unpaid"
Qty: 30
```